NETRONICS R & D LTD.

NEW MILFORD, CONN.

ASSEMBLY/USER MANUAL

ELECTRIC MOUTH FOR S100 BUS

ELMS100.RVA

PLEASE CHECK THE PARTS RECEIVED AGAINST THE PARTS LIST BELOW. NOTE THAT NO REFUNDS ARE POSSIBLE AFTER CONSTRUCTION HAS BEEN STARTED.

PARTS LIST

DESCRIPTION	QUANTITY
PC BOARD	1
CAPACITOR, 10 UF 16V PC	5
CAPACITOR, .01 DISC/50V (MAY BE LABELED 103)	10
CAPACITOR, 15 PF DISC	1
CAPACITOR, 47 PF DISC	1
CAPACITOR, 220 PF DISC (MAY BE LABELED 221)	2
CAPACITOR, .002 DISC (MAY BE LABELED 202)	1
CAPACITOR, .015 EM 100 MYLAR	2
CAPACITOR, 100 UF/16V PC	2
KEYSTONE PHONO JACK	1
SPEAKER S225RA	1
IC SOCKET 24 PIN	2
IC SOCKET 14 PIN	5
IC SOCKET 16 PIN	3
IC SOCKET 40 PIN	1
IC, 74LS266	1
IC, 74LS04	1
IC, 74LS03	1
IC, 74LS10	1
IC, 74LS368	1
IC, 74LS174	1
IC, 74LS138	1
IC, LM 3900	1
IC, 386 (MAY BE LABELED 6-100)	1
IC, MM 54104N	1
IC, MM 52164-SSR1	1
IC, MM 52164-SSR2	1
REGULATOR, 317 L	1
REGULATOR, 7805	1
HEAT SINK #2	1
SCREW, 6/32 X 3/8	1
NUT, 6/32 X 3/8	1
CRYSTAL, 4.0 MH	1
CONTROL 50 K (PT 15 Y D)	1
RESISTOR, 1 MEG 1/4 WATT (BROWN, BLACK, GREEN)	1
RESISTOR, 100 K 1/4 WATT (BROWN, BLACK, YELLOW)	6
RESISTOR, 1.5 K 1/4 WATT (BROWN, GREEN, RED)	1
RESISTOR, 82 OHM 1/4 WATT (GREY, RED, BLACK)	1
RESISTOR, 10 OHM 1/4 WATT (BROWN, BLACK, BLACK)	1
RESISTOR, 4.7 K 1/4 WATT (YELLOW, VIOLET, RED)	7
RESISTOR, 1 K OHM 1/4 WATT (BROWN, BLACK, RED)	1
RESISTOR, 390 OHM 1/4 WATT (ORANGE, WHITE, BROWN)	1
RESISTOR, 180 OHM 1/4 WATT (BROWN, GREY, BROWN)	1
7 POSITION SWITCH (DIP STYLE)	1
INSTRUCTION MANUAL	1
SCHEMATIC/ASSEMBLY DRAWING	1

REFUND POLICY

NO REFUNDS OR EXCHANGES ARE MADE ON ANY KIT PRODUCTS WHICH HAVE BEEN ASSEMBLED OR PARTIALLY ASSEMBLED BY THE CUSTOMER. REFER TO THE LIMITED WARRANTY SECTION FOR SERVICE WHICH IS AVAILABLE AT ADDITIONAL COST IN THE EVENT OF DIFFICULTY.

ASSEMBLY PROCEDURE

NOTE: WE RECOMMEND USING A 25-40 WATT MAXIMUM SOLDERING IRON WITH A FINE POINT TIP WHICH IS CLEAN AND BRIGHT. THE SOLDER SHOULD BE A THIN ROSEN CORE TYPE. USE OF ACID CORE SOLDER WILL VOID ALL WARRANTIES. SOLDER SHOULD NOT BE APPLIED DIRECTLY TO THE SOLDERING IRON TIP. THE TIP IS USED TO HEAT THE COMPONENT LEADS TO BE CONNECTED. SOLDER IS APPLIED TO THE LEADS AND THE IRON IS REMOVED AFTER THE SOLDER HAS FLOWED MAKING A SECURE MECHANICAL AND ELECTRICAL CONNECTION. DO NOT APPLY THE IRON FOR MORE THAN 5 SECONDS AT ONE TIME. ALLOW THE COMPONENTS TO COOL IF A SECOND APPLICATION OF SOLDER IS REQUIRED. A PROPER SOLDER CONNECTION IS USUALLY MADE WITH A MINIMUM OF SOLDER WHICH PREVENTS SOLDER FROM BUILDING UP UNDER THE COMPONENT OR IC SOCKET ON THE COMPONENT SIDE OF THE P.C. BOARD. IF YOU ACCIDENTALLY APPLY TOO MUCH SOLDER REMOVE THE EXCESS WITH A SOLDER SUCKER OR WICK EITHER BEING AVAILABLE AT YOUR LOCAL ELECTRONICS STORE. REMEMBER USING A HIGHER WATTAGE IRON OR APPLYING THE HEAT TOO LONG WILL RESULT IN THE FOIL DELAMINATING FROM THE P.C. BOARD AND POSSIBLE INTERMITTANT OPERATION.

REFER TO ASSEMBLY DRAWING WHEN REQUESTED

(✓) INSTALL 2 - 24 PIN IC SOCKETS AT LOCATIONS U1,2. SOLDER.

(✓) INSTALL 5 - 14 PIN IC SOCKETS AT LOCATIONS U11,15,16,17,18. SOLDER.

(✓) INSTALL 3 - 16 PIN IC SOCKETS AT LOCATIONS U12,13,14. SOLDER.

(✓) INSTALL 1 - 40 PIN IC SOCKET AT LOCATION U9. SOLDER.

(✓) INSTALL 10 - .01 DISC CAPACITORS (MAYBE LABELED 103) AT LOCATIONS C9,12-19,25. SOLDER.

(✓) INSTALL A 15 PF DISC CAPACITOR AT LOCATION C20. SOLDER.

(✓) INSTALL A 47 PF DISC CAPACITOR AT LOCATION C21. SOLDER.

(✓) INSTALL 2 - 220 PF DISC CAPACITORS (MAY BE LABELED 221) AT LOCATIONS C2 & 3. SOLDER.

(✓) INSTALL A .002 DISC CAPACITOR (MAY BE LABELED 202) AT LOCATION C1. SOLDER.

(✓) INSTALL 2 - .015 MYLAR CAPACITORS AT LOCATIONS C4 & 5. SOLDER.

(✓) INSTALL 2 - 100 UF CAPACITORS AT LOCATIONS C6 & 7. NOTE POLARITY. SOLDER.

(√) INSTALL THE PHONO JACK AT LOCATION J1 AS SHOWN. SOLDER.

(√) INSTALL IC 386 (MAY BE LABELED 6-100) AT LOCATION U10. NOTE POSITION OF PIN #1. SOLDER.

(√) INSTALL REGULATOR 7805, AT LOCATION Q2 AS SHOWN. PLACE THE HEAT SINK BETWEEN THE REGULATOR AND THE PC BOARD. SECURE THE REGULATOR AND HEAT SINK TO THE PC BOARD USING A 6-32 X 3/8" SCREW AND NUT. SOLDER.

(√) INSTALL THE 4.0 MHZ CRYSTAL AT LOCATION Y1 (ALLOW 1/8" SPACE BETWEEN THE BOTTOM OF THE CRYSTAL AND THE PC BOARD). SOLDER.

(√) INSTALL THE 50K VOLUME CONTROL AT LOCATION R17. SOLDER.

(√) INSTALL A 1 MEG RESISTOR (BROWN,BLACK,GREEN) AT LOCATION R16. SOLDER.

(√) INSTALL 6 - 100K RESISTORS (BROWN,BLACK,YELLOW) AT LOCATIONS R8-R13. SOLDER.

(√) INSTALL A 1.5K RESISTOR (BROWN,GREEN,RED) AT LOCATION R15. SOLDER.

(√) INSTALL A 10 OHM RESISTOR (BROWN,BLACK,BLACK) AT LOCATION R14. SOLDER.

(√) INSTALL 7 - 4.7K RESISTORS (YELLOW, VIOLET, RED) AT LOCATIONS R1-7. SOLDER.

(√) INSTALL A 180 OHM RESISTOR (BROWN,GREY,BROWN) AT LOCATION R21. SOLDER.

( ) IF YOU PLAN ON USING THE "ON BOARD" SPEAKER CONNECT TWO 1 1/2" INSULATED LEADS (NOT SUPPLIED) TO THE TERMINALS ON THE BACK OF THE SPEAKER. SOLDER.

( ) MOUNT THE SPEAKER TO THE PC BOARD (USE A DROP OF CEMENT) AND CONNECT THE SPEAKER LEADS TO THE PC BOARD HOLES MARKED SPK A & B. SOLDER.

(√) INSTALL THE 7 POSITION SWITCH (DIP STYLE) AT LOCATION SW-1 AS SHOWN. SOLDER.

(√) INSTALL REGULATOR LM 317 AT LOCATION Q1. NOTE POSITION OF FLAT SIDE. SOLDER.

(√) INSTALL A 82 OHM RESISTOR (GREY, RED, BLACK) AT LOCATION R18. SOLDER.

(√) INSTALL A 390 OHM RESISTOR (ORANGE, WHITE, BROWN) AT LOCATION R19. SOLDER.

(√) INSTALL A 1K RESISTOR (BROWN, BLACK, RED) AT LOCATION R20. SOLDER.

(√) INSTALL FIVE-10 UF CAPACITORS AT LOCATIONS C8, 10, 11, 23, 24. NOTE POLARITY. SOLDER

( ) IF YOU HAVE A + 16 V SUPPLY ON YOUR S100 BUS INSTALL JUMPERS AT THE FOLLOWING LOCATIONS:

~~S3B~~, ~~S5A~~, ~~S8~~, S10

USE EXCESS RESISTOR LEAD LENGTHS FOR JUMPERS.
IF YOU ARE NOT USING A + 16 V SUPPLY ON YOUR S100 BUS INSTALL THE JUMPERS AT S2, S3A, S5A, S8, S10

( ) INSTALL IC'S AS FOLLOWS. NOTE POSITION OF PIN #1.

U1	MM52164-SR1
U2	MM52164-SR2
U3-8	NONE
U9	MM54104N
~~U11~~	LM3900
~~U12~~	74LS174
~~U13~~	74LS138
~~U14~~	74LS368
~~U15~~	74LS10
U16	74LS266
U17	74LS03
U18	74LS04

S100 INSTALLATION NOTES

( ) SET SW-1 AS FOLLOWS:

SWITCH POSITION	FUNCTION	SET
1	SPEAKER ON/OFF	ON
2	A7 (PORT ADDRESS LINE)	OFF
3	A6 (PORT ADDRESS LINE)	ON
4	A5 (PORT ADDRESS LINE)	ON
5	A4 (PORT ADDRESS LINE)	ON
6	PRD (READY LINE)	OFF
7	NOT USED	

( ) POSITIONS 1-5 ON SW-1 DETERMINE WHICH INPUT PORT ADDRESS IS BEING USED BY THE ELECTRIC MOUTH. (OX TO FX) X DENOTES WHICH SET OF SPEECH ROMS ARE SELECTED. TO CHANGE THE ADDRESS USED WRITE THE BINARY EQUIVALENT OF THE FIRST DIGIT OF THE PORT TO BE SELECTED. FOR EXAMPLE, PORT 80 ....8 = 1000. NOTE THAT THE MOST SIGNIFICANT BIT = ADDRESS A7, ETC. THEN SET SW-1 ADDRESS LINES "OFF" FOR ALL BITS WITH A "1" AND "ON" FOR BITS WITH A "0". THE X (SECOND DIGIT OF THE PORT #) DENOTES WHICH WORD SET IS BEING ADDRESSED.

0 = WORD SET 1 AT LOCATION U1 & U2
2 = WORD SET 2 AT LOCATION U3 & U4
4 = WORD SET 3 AT LOCATION U5 & U6
6 = WORD SET 4 AT LOCATION U7 & U8

THIS DIGIT IS SELECTED BY THE PROGRAM.

( ) NOW PLUG THE ELECTRIC MOUTH INTO YOUR S100 BUS.

( ) LOAD THE FOLLOWING PROGRAM

```
10 FOR J = 0 TO 143
20 OUT 128, J
30 A = INP(128)
40 IF A = 255 THAN 30
50 NEXT J
60 END
RUN
```

( ) THE 128 USED IN THE OUT INSTRUCTION REPRESENTS THE DECIMAL VALUE OF PORT 80(HEX). WE ARE OUTPUTING THE ENTIRE VOCABULARY OF THE #1 ROM SET WHICH IS FROM 00 TO 143 DECIMAL. TO OUTPUT A SPECIFIC WORD SIMPLY OUTPUT THE DECIMAL ADDRESS OF THE WORD TO THE PORT SELECTED. DATA BIT 7 OF THE INPUT PORT SELECTED (MUST BE SAME AS OUTPUT PORT) IS SET TO ~~ZERO~~ one WHEN THE ELECTRIC MOUTH IS BUSY. WE MUST TEST FOR A BUSY BEFORE OUTPUTING THE NEXT WORD (SEE PROGRAM LINES 30 & 40 ABOVE).

WORD LIST WITH DECIMAL & HEX ADDRESSES

WORD	DEC ADDR	(HEX)	WORD	DEC ADDR	(HEX)
THIS IS DIGITALKER	0	00	A	32	20
ONE	1	01	B	33	21
TWO	2	02	C	34	22
THREE	3	03	D	35	23
FOUR	4	04	E	36	24
FIVE	5	05	F	37	25
SIX	6	06	G	38	26
SEVEN	7	07	H	39	27
EIGHT	8	08	I	40	28
NINE	9	09	J	41	29
TEN	10	0A	K	42	2A
ELEVEN	11	0B	L	43	2B
TWELVE	12	0C	M	44	2C
THIRTEEN	13	0D	N	45	2D
FOURTEEN	14	0E	O	46	2E
FIFTEEN	15	0F	P	47	2F
SIXTEEN	16	10	Q	48	30
SEVENTEEN	17	11	R	49	31
EIGHTEEN	18	12	S	50	32
NINETEEN	19	13	T	51	33
TWENTY	20	14	U	52	34
THIRTY	21	15	V	53	35
FORTY	22	16	W	54	36
FIFTY	23	17	X	55	37
SIXTY	24	18	Y	56	38
SEVENTY	25	19	Z	57	39
EIGHTY	26	1A	AGAIN	58	3A
NINETY	27	1B	AMPERE	59	3B
HUNDRED	28	1C	AND	60	3C
THOUSAND	29	1D	AT	61	3D
MILLION	30	1E	CANCEL	62	3E
ZERO	31	1F	CASE	63	3F

WORD	DEC ADDR	(HEX)	WORD	DEC ADDR	(HEX)
CENT	64	40	LOWER	104	68
400HERTZ TONE	65	41	MARK	105	69
80HERTZ TONE	66	42	METER	106	6A
20MS SILENCE	67	43	MILE	107	6B
40MS SILENCE	68	44	MILLI	108	6C
80MS SILENCE	69	45	MINUS	109	6D
160MS SILENCE	70	46	MINUTE	110	6E
320MS SILENCE	71	47	NEAR	111	6F
CENTI	72	48	NUMBER	112	70
CHECK	73	49	OF	113	71
COMMA	74	4A	OFF	114	72
CONTROL	75	4B	ON	115	73
DANGER	76	4C	OUT	116	74
DEGREE	77	4D	OVER	117	75
DOLLAR	78	4E	PARENTHESIS	118	76
DOWN	79	4F	PERCENT	119	77
EQUAL	80	50	PLEASE	120	78
ERROR	81	51	PLUS	121	79
FEET	82	52	POINT	122	7A
FLOW	83	53	POUND	123	7B
FUEL	84	54	PULSES	124	7C
GALLON	85	55	RATE	125	7D
GO	86	56	RE	126	7E
GRAM	87	57	READY	127	7F
GREAT	88	58	RIGHT	128	80
GREATER	89	59	SS*	129	81
HAVE	90	5A	SECOND	130	82
HIGH	91	5B	SET	131	83
HIGHER	92	5C	SPACE	132	84
HOUR	93	5D	SPEED	133	85
IN	94	5E	STAR	134	86
INCHES	95	5F	START	135	87
IS	96	60	STOP	136	88
IT	97	61	THAN	137	89
KILO	98	62	THE	138	8A
LEFT	99	63	TIME	139	8B
LESS	100	64	TRY	140	8C
LESSER	101	65	UP	141	8D
LIMIT	102	66	VOLT	142	8E
LOW	103	67	WEIGHT**	143	8F

*"SS" MAKES ANY SINGULAR WORD PLURAL

**ADDRESS 143 IS THE LAST LEGAL ADDRESS IN THIS PARTICULAR WORD LIST. EXCEEDING ADDRESS 143 WILL PRODUCE PIECES OF UNINTELLIGIBLE INVALID SPEECH DATA.

SAMPLE BASIC PROGRAMS

```
10   FOR J = 1 TO 9
20   READ W
30   OUT 128,W
40   A = INP(128)
50   IF A = 255 THEN 40
60   NEXT J: END
70   DATA 128, 139, 96, 10, 110, 2, 5, 65, 66
RUN
```

```
 5   CLS
10   FOR J = 1 TO 17
20   READ W, W$
30   OUT 128, W
35   PRINT CHR$(23): PRINT @ 470, W$
40   A = INP(128)
50   IF A = 255 THEN 40
55   CLS
60   NEXT J
65   PRINT CHR$(28):END
70   DATA 138, "THE", 139, "TIME", 96, "IS", 10, "TEN"
80   DATA 2, "TO", 5, "FIVE", 65, " ", 66
RUN
```

SAMPLE MACHINE LANGUAGE PROGRAM

```
0000          2E00      MVI    00
0002          TD        M      A, L
0003 OUT      D380      OUT    A
0005          CD0AF8    CALL   INTEST
0008          2C        INC    L
0009          C302F8    JMP    OUT
000A INTEST   DB80      IN     80
000E          B7        ORA    A
000F          FA0BF8    JMP    INTEST
0012          C9        RET
```

THIS PROGRAM WILL OUTPUT ENTIRE LIST (NOTE THAT AFTER LAST WORD INVALID ADDRESSES RESULT IN GARBLED SOUNDS).

.DDITIONAL WORDS (VOX II) ARE AVAILABLE AT $39.95 + 2.00 P & I. THESE SIMPLY PLUG INTO U3 & U4 ON THE ELECTRIC MOUTH.

VOX II WORD LIST WITH DECIMAL & HEX ADDRESSES

WORD	DEC ADDR	(HEX)	WORD	DEC ADDR	(HEX)
ABORT	0	00	FOURTH	50	32
ADD	1	01	FORWARD	51	33
ADJUST	2	02	FROM	52	34
ALARM	3	03	GAS	53	35
ALERT	4	04	GET	54	36
ALL	5	05	GOING	55	37
ASK	6	06	GREEN	56	38
ASSISTANCE	7	07	HALE	57	39
ATTENTION	8	08	HEAT	58	3A
BLUE	9	09	HELLO	59	3B
BRAKE	10	0A	HELP	60	3C
BUTTON	11	0B	HURTS	61	3D
BUY	12	0C	HOLD	62	3E
CALL	13	0D	HOT	63	3F
CALLED	14	0E	IN	64	40
CAUTION	15	0F	INCORRECT	65	41
CELSIUS	16	10	INTRUDER	66	42
CENTIGRADE	17	11	KEY	67	43
CHANGE	18	12	LEVEL	68	44
CIRCUIT	19	13	LIGHT	69	45
CIGAR	20	14	LOAD	70	46
CLOSE	21	15	LOCK	71	47
COLD	22	16	LONGER	72	48
COMPLETE	23	17	MORE	73	49
CONTINUE	24	18	MOVE	74	4A
COPY	25	19	NEXT	75	4B
CORRECT	26	1A	NO	76	4C
CREASE	27	1B	NORMAL	77	4D
"DE"	28	1C	NORTH	78	4E
DEPOSIT	29	1D	NOT	79	4F
DIAL	30	1E	NOTICE	80	50
DOOR	31	1F	OPEN	81	51
EAST	32	20	OPERATOR	82	52
"ED"	33	21	OR	83	53
EMERGENCY	34	22	PASS	84	54
ENTER	35	23	PER	85	55
ENTRY	36	24	POWER	86	56
"ER"	37	25	PRESS	87	57
"EHT"	38	26	PRESSURE	88	58
EVACUATE	39	27	PROCESS	89	59
EXIT	40	28	PULL	90	5A
FAIL	41	29	PUSH	91	5B
FAILURE	42	2A	PUT	92	5C
FAHRENHEIT	43	2B	QUARTER	93	5D
FAST	44	2C	RANGE	94	5E
FASTER	45	2D	REACHED	95	5F
FIFTH	46	2E	RECEIVE	96	60
FIRE	47	2F	RECORD	97	61
FIRST	48	30	REVERSE	98	62
FLOOR	49	31	RED	99	63

VOX II WORD LIST WITH DECIMAL & HEX ADDRESSES (CONTINUED)

WORD	DEC ADDR	(HEX)
REPAIR	100	64
REPEAT	101	65
REPLACE	102	66
ROOM	103	67
SAFE	104	68
SECOND	105	69
SECURE	106	6A
SELECT	107	6B
SEND	108	6C
SERVICE	109	6D
SIDE	110	6E
SLOW	111	6F
SLOWER	112	70
SMOKE	113	71
SOUTH	114	72
STATION	115	73
SWITCH	116	74
SYSTEM	117	75
TEMPERATURE	118	76
TEST	119	77
"TH"	120	78
THANK	121	79
THIRD	122	7A
THIS	123	7B
TURN	124	7C
UNDER	125	7D
USE	126	7E
WAITING	127	7F
WARNING	128	80
WAS	129	81
WATER	130	82
WEST	131	83
WIND	132	84
WINDOW	133	85
YELLOW	134	86
YES	135	87
ZONE	136	88

ADDITIONAL WORDS (VOX II) ARE AVAILABLE AT $39.95 + 2.00 P & I. THESE SIMPLY PLUG INTO U3 & U4 ON THE ELECTRIC MOUTH.

EXTERNAL SPEAKER: TO USE AN EXTERNAL SPEAKER SIMPLY TURN OFF THE ON BOARD SPEAKER (SW-1) AND PLUG IN ANY 8 OHM SPEAKER OR ADDITION POWER AMPLIFIER INTO THE EXT SPEAKER JACK J1.

LIMITED WARRANTY

ALL COMPONENTS IN THIS KIT (THE COMPLETE ASSEMBLY IF PURCHASED ASSEMBLED) ARE WARRANTEED FOR SIX MONTHS FROM THE DATE OF PURCHASE. DEFECTIVE PARTS WILL BE REPLACED OR REPAIRED FREE OF CHARGE IF THEY ARE RETURNED WITHIN SIX MONTHS WITH $1.00 EACH, TO COVER THE COST OF TESTING THE RETURNED PART. NO PAYMENT REQUIRED IF THE PRODUCT WAS PURCHASED ASSEMBLED.

RETURN PARTS IN A STURDY CARTON, PREPAID AND INSURED TO:

NETRONICS R & D LTD.
333 LITCHFIELD ROAD
NEW MILFORD, CONN. 06776

ENCLOSE A NOTE DESCRIBING THE DEFECTS. THIS WARRANTY APPLIES ONLY TO PARTS WHICH HAVE NOT BEEN MISUSED, INSTALLED IMPROPERLY, OR OTHERWISE DESTROYED BY THE USER.

IN CASE OF DIFFICULTY

IF AFTER CHECKING YOUR WORK CAREFULLY YOU ARE STILL NOT OBTAINING SATISFACTORY RESULTS, THE FACTORY SERVICE DEPARTMENT WILL INSPECT, REPAIR, AND FULLY TEST YOUR ELECTRIC MOUTH FOR A FLAT FEE OF $15.00. THIS FEE INCLUDES RETURN POSTAGE (INSURED). THE SERVICE DEPARTMENT IS AVAILABLE VIA TELEPHONE BETWEEN THE HOURS OF 2-5 PM EASTERN STANDARD TIME MONDAY THRU FRIDAY. PLEASE CALL (203)354-9375. DO NOT CALL THE 800 SALES ORDER NUMBER FOR SERVICE INFORMATION BECAUSE YOUR CALL CAN NOT BE TRANSFERRED TO THE SERVICE DEPARTMENT FROM THAT LINE.

IF YOU ARE RETURNING ADDITIONAL KITS TO BE TESTED IN CONJUNCTION WITH THIS KIT PLEASE CHECK THE APPROPRIATE ASSEMBLY MANUAL FOR THE RATES WHICH APPLY TO ADDITIONAL ITEMS RETURNED.

DO NOT RETURN ANY KITS INSTALLED IN CABINETS OF ANY KIND. ADDITIONAL CHARGES PLUS A DELAY WILL BE NECESSARY IF YOU RETURN THE KIT INSTALLED IN A CABINET.

NOTE: PRICES QUOTED ABOVE APPLY TO CUSTOMERS LIVING IN THE USA. ADDITIONAL POSTAGE IS REQUIRED IF SHIPMENT IS TO MADE OUTSIDE THE USA. CONSULT PLACE OF PURCHASE FOR REPAIR PRICES IF PURCHASED OUTSIDE OF THE USA.

IMPORTANT

PRICES QUOTED ABOVE COVER THE COST OF ALL PARTS AND LABOR EXCEPT THOSE DESTROYED BY THE USER. ALL KITS MUST BE FULLY ASSEMBLED AND REMOVED FROM ANY CABINET. IF ADDITIONAL CHARGES ARE NECESSARY YOU WILL BE NOTIFIED PRIOR TO ANY WORK BEING DONE. NETRONICS WILL NOT SERVICE ANY UNITS PURCHASED AS PRINTED CIRCUIT BOARDS ONLY.